functionally equivalent

A protein having a molecular weight of about 24kD and 1. capable of specifically binding to a protein of hepatitis C virus / of 5

variant or fragment thereof.

A protein or a functionally equivalent variant fragment thereof according to claim 1 which is functionally unglycosylated.

A protein or a functionally equivalent variant or З. fragment thereof according to claim 1 or 2 wherein the protein is a transmembrane protein.

A process for the preparation of a protein or a functionally equivalent variant or fragment thereof according to any one of claims 1 to 3 comprising the step of culturing cells exhibiting binding to an HCV protein and purifying from a cell preparation a protein according to any one of claims 1 to 1

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5. A process according (to /claim / 4 wherein the cell preparation is a plasma cell membrane preparation.

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A process according to claim 4 or 5 wherein the cells are selected and cloned to provide hyperexpression of the protein according to any one of claims 1 to 3.

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A process according to any one of claims 4 to 6 wherein the cell preparation is subjected to an ammonium sulphate precipitation purification step employing ammenium sulphate at between 33 and 50%

8. A process according to any one of claims 4 to 7 35 wherein the purification involves at least one step of hydrophobic interaction chromatography.

- 9. A process according to any one of claims 4 to 8 wherein the process involves at least one step of acetone precipitation
- 5 10. A process according to any one of claims 4 to 8 wherein comprising the steps of:

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- i) preparing a plasma cell membrane preparation of mammalian cells selected for hyperexpression of the 24kd protein of the invention,
- ii) subjecting the preparation to ammonium sulphate precipitation at less than 33% saturation and retaining the supernatant,

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iii) subjecting the supernatant to ammonium sulphate precipitation at between 33 and 50% saturation and retaining the precipitate, and

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- iv) resuspending the precipitate and subjecting it to hydrophobic interaction chromatography
- 11. A method for treating an infection of HCV comprising administering to a patient an amount of a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof effective to reduce the infectivity of the virus.
- 12. A pharmaceutical composition comprising a protein
 30 according to any one of claims 1 to 3 or a
 functionally equivalent variant or fragment thereof,
 optionally as a pharmaceutically acceptable salt, in
 combination with a pharmaceutically acceptable
 carrier.

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13. A process for preparing a pharmaceutical composition, in which a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment

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thereof is brought into association with a pharmaceutically acceptable carrier.

- 14. A protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof for use as a pharmaceutical.
- 15. Use of a protein according to any one of claims 1 to
 3 or a functionally equivalent variant or fragment
 thereof in the manufacture of a medicament for the
 treatment of an HCV infection.
- 16. An assay for HCV antibodies in a serum sample comprising the step of allowing competitive binding between antibodies in the sample and a known amount of an HCV protein for binding to a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof and measuring the amount of the known HCV protein bound

A diagnostic kit comprising the protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof.

functionally equivalent variant or fragment thereof.

- 25 18. A method for screening chemical compounds for ability to bind to the region of HCV responsible for binding to a host cell, comprising measuring the binding of a chemical compound to be screened to a protein according to any one of claims 1 to 3 or a
 - 19. A transgenic non-human manual, carrying a transgene encoding a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof.
 - 20. A process for producing a transgenic animal comprising the step of introducing a DNA encoding a

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protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof into the embryo of a non-human mammal, preferably a mouse.

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